

APPENDIX N

RIPARIAN RESERVE EVALUATION -

SPECIES OF CONCERN DETERMINATION

The Federal Guide for Watershed Analysis (Version 2.2), Riparian Reserve Evaluation Techniques and Synthesis (REO 1995) presents procedures (in Appendix B) for determining species of concern when Riparian Reserve management or boundary adjustments are proposed along intermittent stream channels.

The following three lists are used to identify those species of concern potentially occurring within the analysis area. Those which would benefit from Riparian Reserve Scenarios 1 and 2 are duplicated from the Federal Guide (Appendix B) on Lists 1 and 2. Species on List 3 are locally-occurring and currently recognized as needing management at the site- to watershed-scale.

All species on Lists 1, 2 and 3 are then classified as to dispersal type (restricted vs. broad) and pattern (riparian exclusive vs. riparian supplemental) in Table N.1. They also are characterized as to distribution (localized vs. widely distributed) and abundance (rare vs common) in Table N.2. Finally, Table N.3 assesses the vulnerability of these species by combining the previous two classifications. Those species assigned to the shaded boxes in Table N.3 are the “species of concern” for the riparian reserve evaluation, and are discussed further in Section VII.

List 1 Species – (Riparian Dependent species - species benefitting from Riparian Reserve Scenario 1 - 100 foot buffer on all intermittent streams)

Bryophytes

Antitrichia curtipendula
Douinia ovata
Kurzia makinoana

Fungi

Clitocybe subditopoda
Galerina atkinsoniana
Galerina cerina
Galerina heterocystis
Galerina vittaeformis
Helvella compressa
Helvella maculata
Phlogiotis helvelloides
Rickenella setipes

Lichens

Cetrelia cetrarioides
Leptogium saturninum
Platismatia lacunosa
Ramalina thrausta
Usnea longissima

Amphibians

Southern torrent salamander
Tailed frog

Fish

Chinook salmon (fall)
Coho salmon
Coastal cutthroat trout
Winter steelhead

Bats

Fringed myotis
Hoary bat
Long-eared myotis
Long-legged myotis
Silver-haired bat

Mammals

Fisher
Marten
Red tree vole

List 2 Species – (Species benefitting from Riparian Reserve Scenario 2 - 100 foot buffer on intermittent streams in Key Watersheds and 50 foot in all others)

Fungi

Gomphus clavatus
Gomphus floccosus
Gomphus kauffmanii
Phaeocollybia attenuata
Phaeocollybia californica
Phaeocollybia fallax
Phaeocollybia kauffmanii
Phaeocollybia olivacea
Phaeocollybia picea
Phaeocollybia pseudofestiva
Phaeocollybia scatesiae

Lichens

Cladonia bellidiflora
Cladonia umbricola
Icmadophila ericetorum
Pilophorus acicularis

Vascular Plant

Allotropa virgata

Mollusk

Prophysaon dubium

Amphibians

Del Norte salamander
Dunn's salamander
Northwestern salamander
Pacific giant salamander
Rough-skinned Newt
Tailed frog

Birds

Marbled murrelet
Northern spotted owl

Bats

California myotis
Yuma myotis

Mammal

Red tree vole

List 3 Species – Species of Concern (includes Survey and Manage/Protection Buffer and Special Status species)

Bryophytes

Diplophyllum plicatum
Ulota megalospora

Fungi

Balsamia nigra
Boletus pulcherrimus
Cantherellus formosus
Cantherellus subalbidus
Cantherellus tubaeformis
Endogone oregonensis
Gastroboletus turbinatus
Hydnum repandum
Leucogaster citrinus
Otidea leporina
Otidea onotica
Otidea smithii
Sarcosoma mexicana
Sowerbyella rhenana
Sparassis crispa
Club Coral fungi (7 sp)
Rare Coral fungi (15 sp)
Uncommon Coral fungi (13 sp)
Rare mycorrhizal gilled mushrooms (7 sp)
Uncommon mycorrhizal gilled mushrooms (15 sp)
Rare saprobe gilled mushrooms (6 sp)
Uncommon saprobe gilled mushrooms (17 sp)

Lichens

Calicium spp.
Chaenotheca spp.
Lobaria hallii
Lobaria linita
Lobaria oregana
Lobaria pulmonaria
Lobaria scrobiculata
Nephroma bellum
Nephroma helveticum
Nephroma laevigatum
Nephroma occultum
Nephroma parile

Nephroma resupinatum

Pannaria rubiginosa
Pannaria saubinetii
Peltigera collina
Pseudocyphellaria anomala
Pseudocyphellaria anthrapsis
Pseudocyphellaria crocata
Pseudocyphellaria rainierensis
Sticta fuliginosa
Sticta limbata

Vascular Plants

Euonymus occidentalis
Iliamna latibracteata

Mollusks

Prophysaon coeruleum
Megomphix hemphilli

Amphibians and Reptiles

Clouded salamander
Foothill yellow-legged frog
Northern red-legged frog
Shartail snake
Western pond turtle

Invertebrate

Burnell's false water penny beetle

Bird

Bald eagle
Pileated woodpecker

Bat

Townsend's big-eared bat

Mammal

Beaver
White-footed vole

The next step sorts species into one of four categories based on how they generally use Riparian Reserve habitats (Table N.1).

Table N.1.
Species Sorted by Use of Riparian Habitats and Dispersal Type

Source	Dispersal			
		Restricted	Broad	
Exclusive	BRYOPHYTES <i>Diplophyllum plicatum</i>	<i>Kurzia makinoana</i>		
	FUNGI <i>Citocybe subditopoda</i>	<i>Phlogiotis helvelloides</i>		
	LICHENS <i>Cetraria cetrarioides</i> <i>Platismatia lacunosa</i> <i>Usnea longissima</i>	<i>Leptogium saturninum</i> <i>Ramalina thrausta</i>		
	VASCULAR PLANT <i>Iliamna latibracteata</i>			
	AMPHIBIANS and REPTILE Dunn's salamander Tailed frog	Southern torrent salamander Western pond turtle		
	FISH Chinook salmon (fall) Coastal cutthroat trout	Coho salmon Winter steelhead		
	INVERTEBRATE Burnell's false water penny beetle			
Supplemental	FUNGI <i>Boletus pulcherrimus</i> <i>Galerina atkinsoniana</i> <i>Galerina heterocystis</i> <i>Oidea leporina</i> <i>Oidea smithii</i> <i>Sparassis crispa</i> Uncommon coral fungi (13 sp) Rare mycorrhizal gilled mushrooms (7 sp) Uncommon mycorrhizal gilled mushrooms (15 sp) Rare saprobe gilled mushrooms (6 sp) Uncommon saprobe gilled mushrooms (17 sp)	<i>Endogone oregonensis</i> <i>Galerina cerina</i> <i>Leucogaster citrinus</i> <i>Oidea orotica</i> <i>Rickenella setipes</i> Rare coral fungi (15 sp) Uncommon coral fungi (13 sp) Rare mycorrhizal gilled mushrooms (7 sp) Uncommon mycorrhizal gilled mushrooms (15 sp) Rare saprobe gilled mushrooms (6 sp) Uncommon saprobe gilled mushrooms (17 sp)	BRYOPHYTES <i>Antitrichia curtipedula</i> <i>Ulotrichia megalospora</i>	<i>Douinia ovata</i>
	LICHENS <i>Calicium spp.</i> <i>Cladonia bellidiflora</i> <i>Icmadophila ericetorum</i>	<i>Chaenotheca spp.</i> <i>Cladonia umbricola</i> <i>Lobaria hallii</i>	FUNGI <i>Balsamia nigra</i> <i>Cantherellus subalbidus</i>	<i>Cantherellus formosus</i>
	<i>Lobaria linita</i>	<i>Lobaria oregana</i>	<i>Gomphus clavatus</i>	<i>Gomphus floccosus</i>
	<i>Lobaria pulmonaria</i>	<i>Lobaria scrobiculata</i>	<i>Gomphus kauffmannii</i>	<i>Gastroboletus turbinatus</i>
	<i>Nephroma bellum</i>	<i>Nephroma helveticum</i>	<i>Helvella compressa</i>	<i>Helvella maculata</i>
	<i>Nephroma laevigatum</i>	<i>Nephroma occultum</i>	<i>Hydnellum repandum</i>	<i>Phaeocollybia attenuata</i>
	<i>Nephroma parile</i>	<i>Nephroma resupinatum</i>	<i>Phaeocollybia californica</i>	<i>Phaeocollybia fallax</i>
	<i>Pannaria rubiginosa</i>	<i>Pannaria saubinetii</i>	<i>Phaeocollybia kauffmannii</i>	<i>Phaeocollybia olivacea</i>
	<i>Peltigera collina</i>	<i>Pilophorus acicularis</i>	<i>Phaeocollybia picae</i>	<i>Phaeocollybia scatesiae</i>
	<i>Pseudocyphellaria anomala</i>		<i>Sarcosoma mexicana</i>	<i>Sowerbyella rhenana</i>
	<i>Pseudocyphellaria anthrapsis</i>		Club coral fungi (7 sp)	
	<i>Pseudocyphellaria crocata</i>			
	<i>Pseudocyphellaria rainierensis</i>			
	<i>Sticta fuliginosa</i>	<i>Sticta limbata</i>		
	VASCULAR PLANT <i>Allotropa virgata</i>			
	MAMMAL Red tree vole			
	MOLLUSKS <i>Megomphix hemphilli</i> <i>Prophysaon coeruleum</i>	<i>Prophysaon dubium</i>		
	AMPHIBIANS Clouded salamander	Del Norte salamander		

The next step is to assess the geographic distribution and abundance for species of concern. Table N.2 classifies species using this scheme.

Table N.2.
Species Sorted by Relative Distribution (Range) and Abundance

		Localized	Widely Distributed	
Rare		BRYOPHYTE <i>Diphophyllum plicatum</i> FUNGI <i>Endogone oregonensis</i> LICHENS <i>Lobaria linita</i> <i>Nephroma occultum</i> <i>Pannaria rubiginosa</i> <i>Pseudocypsellaria rainierensis</i> VASCULAR PLANT <i>Iliamna latibracteata</i> INVERTEBRATE Burnell's false water penny beetle AMPHIBIAN Del Norte salamander	BRYOPHYTE <i>Kurzia makinoana</i> FUNGI <i>Boletus pulcherrimus</i> <i>Gastroboletus turbinatus</i> <i>Otidea crotica</i> <i>Phaeocollybia picace</i> <i>Rickenella setipes</i> Club coral fungi (7 sp) Uncommon coral fungi (13 sp) Uncommon mycorrhizal gilled mushrooms (15 sp) LICHENS <i>Cetrelia cetraroides</i> <i>Leptogium saturninum</i> <i>Pilophorus aciculatus</i> <i>Ramalina thrausta</i> VASCULAR PLANTS <i>Allotropa virgata</i> MOLLUSKS <i>Megomphix hemphilli</i> AMPHIBIANS and REPTILES Clouded salamander Shartail snake Western pond turtle BIRDS Bald eagle Northern spotted owl BATS California myotis Hoary bat Silver-haired bat MAMMALS Fisher Red tree vole	
Common			BRYOPHYTE <i>Antitrichia curtipendula</i> <i>Ulotrichum megalospora</i> LICHENS <i>Calicium spp.</i> <i>Cladonia bellidiflora</i> <i>Lobaria oregana</i> <i>Lobaria scrobiculata</i> <i>Nephroma helveticum</i> <i>Nephroma parile</i> <i>Pannaria saubinetii</i> <i>Pilophorus aciculatus</i> <i>Pseudocypsellaria anthrapsis</i> <i>Sticta fuliginosa</i> FUNGI <i>Balsamia nigra</i> <i>Cantherellus tubaeformis</i> <i>Galerina atkinsoniana</i> <i>Galerina heterocystis</i> <i>Gomphus clavatus</i> <i>Gomphus kauffmanii</i> <i>Helvelia maculata</i> <i>Otidea leporina</i> <i>Phaeocollybia californica</i> <i>Phaeocollybia kauffmanii</i> <i>Phaeocollybia pseudofestiva</i> <i>Sarcosoma mexicana</i> MOLLUSK <i>Prophysaon coeruleum</i> AMPHIBIANS Dunn's salamander Northern red-legged frog Rough-skinned newt FISH Chinook salmon (fall) Coastal cutthroat trout BIRD Pileated woodpecker BATS Long-eared myotis MAMMAL Beaver	<i>Douinia ovata</i> <i>Chaenotheca spp.</i> <i>Icmadophila ericetorum</i> <i>Lobaria pulmonaria</i> <i>Nephroma bellum</i> <i>Nephroma laevigatum</i> <i>Nephroma resupinatum</i> <i>Peltigera collina</i> <i>Pseudocypsellaria anomala</i> <i>Pseudocypsellaria crocata</i> <i>Sticta limbata</i> <i>Cantherellus subalbidus</i> <i>Cantherellus formosus</i> <i>Galerina cerina</i> <i>Galerina vittaeformis</i> <i>Gomphus floccosus</i> <i>Helvelia compressa</i> <i>Hydnellum repandum</i> <i>Phaeocollybia attenuata</i> <i>Phaeocollybia fallax</i> <i>Phaeocollybia olivacea</i> <i>Phaeocollybia scatesiae</i> <i>Sparassis crispa</i> Foothill yellow-legged frog Northwestern salamander Pacific giant salamander Coho salmon Winter steelhead Yuma myotis

The vulnerability of species to losses affecting their persistence from the effects of land-management activities are assessed in Table N.3. Species in the shaded blocks were determined to represent the minimum subset for vulnerability assessment because it is expected that these would be the most sensitive to a change in interim Riparian Reserve boundaries or Riparian Reserve management.

Table N.3.
Ecological Classification of Species for Vulnerability Assessment

	Localized & Rare	Widely Distributed & Rare or Localized & Common	Widely Distributed & Common
Exclusive & Restricted	BRYOPHYTE <i>Diplophyllum plicatum</i> VASCULAR PLANTS <i>Iliamna latibracteata</i> INVERTEBRATE Burnell's false water penny beetle	BRYOPHYTE <i>Kurzia makinoana</i> FUNGI <i>Clitocybe subditopoda</i> <i>Phlogiotis helvelloides</i> LICHENS <i>Cetrelia cetrarioides</i> <i>Leptogium saturninum</i> <i>Platismatia lacunosa</i> <i>Ramalina thrausta</i> <i>Usnea longissima</i> AMPHIBIANS and REPTILE Southern torrent salamander Tailed frog Western pond turtle	AMPHIBIANS Dunn's salamander FISH Chinook salmon (fall) Coho salmon Coastal cutthroat trout Winter steelhead
Exclusive & Broad		VASCULAR PLANTS <i>Euonymus occidentalis</i> MAMMAL White-footed vole	FUNGI <i>Galerina vittaeformis</i> <i>Phaeocollybia pseudofestiva</i> AMPHIBIAN Foothill yellow-legged frog Northern red-legged frog BAT Yuma myotis MAMMAL Beaver

	Localized & Rare	Widely Distributed & Rare or Localized & Common	Widely Distributed & Common
Supplemental & Restricted	<p>FUNGI <i>Endogone oregonensis</i></p> <p>LICHENS <i>Lobaria linita</i> <i>Nephroma occultum</i> <i>Pannaria rubiginosa</i> <i>Pseudocyphellaria rainierensis</i></p> <p>AMPHIBIAN Del Norte salamander</p>	<p>FUNGI <i>Boletus pulcherrimus</i> <i>Leucogaster citrinus</i> <i>Otidea onotica</i> <i>Otidea smithii</i> <i>Rickenella setipes</i> Rare Coral Fungi (15 sp) Uncommon Coral Fungi (13 sp) Rare mycorrhizal gilled mushrooms (7 sp) Uncommon mycorrhizal gilled mushrooms (15 sp) Rare saprobe gilled mushrooms (6 sp) Uncommon saprobe gilled mushrooms (17 sp)</p> <p>LICHENS <i>Cladonia umbricola</i> <i>Lobaria hallii</i></p> <p>VASCULAR PLANT <i>Allotropa virgata</i></p> <p>MAMMAL Red tree vole</p> <p>AMPHIBIAN Clouded salamander</p> <p>MOLLUSKS <i>Megomphix hemphilli</i> <i>Prophysaon dubium</i></p>	<p>FUNGI <i>Galerina atkinsoniana</i> <i>Galerina cerina</i> <i>Galerina heterocysis</i> <i>Otidea leporina</i> <i>Sparassis crispa</i></p> <p>LICHENS <i>Calicium spp.</i> <i>Chaenotheca spp.</i> <i>Cladonia bellidiflora</i> <i>Icmadophila ericetorum</i> <i>Lobaria oregana</i> <i>Lobaria pulmonaria</i> <i>Lobaria scrobiculata</i> <i>Nephroma bellum</i> <i>Nephroma helveticum</i> <i>Nephroma laevigatum</i> <i>Nephroma parile</i> <i>Nephroma resupinatum</i> <i>Pannaria saubinetii</i> <i>Peltigera collina</i> <i>Pilophorus acicularis</i> <i>Pseudocyphellaria anomala</i> <i>Pseudocyphellaria anthrapsis</i> <i>Pseudocyphellaria crocata</i> <i>Sticta fuliginosa</i> <i>Sticta limbata</i></p> <p>MOLLUSK <i>Prophysaon coeruleum</i></p>

Localized & Rare	Widely Distributed & Rare or Localized & Common	Widely Distributed & Common
Supplemental & Broad		FUNGI <i>Gastroboletus turbinatus</i> <i>Phaeocollybia picae</i> <i>Sowerbyella rhenana</i> Club Coral Fungi (7 sp) BIRDS Bald eagle Marbled murrelet Northern spotted owl REPTILE Sharptail snake BATS California myotis Fringed myotis Hoary bat Long-eared myotis Long-legged myotis Silver-haired bat Townsend's big-eared bat MAMMALS Fisher Marten

The species identified in the shaded boxes are those which are discussed further in the Riparian Reserve Evaluation (Section VII), including their habitat associations (see Table VII.1).